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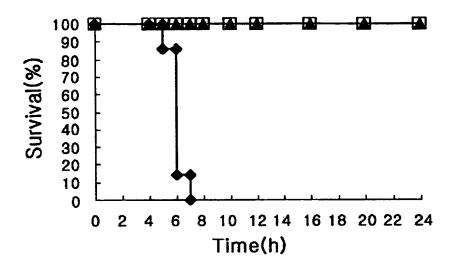
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[Continued on next page]

(54) Title: AN EXTRACT OF ACANTHOPANAX KOREANUM FOR THE TREATMENT OR PREVENTION OF HEPATITIS OR THE LIVER PROTECTIVE DRUG



(57) Abstract: The disclosure concerns an extract of Acanthopanax Koreanum and its use. More particularly, it concerns the extract of Acanthopanax Koreanum comprising: 1) the extract of Acanthopanax Koreanum extracted from water; 2) among the water extract, the extract of Acanthopanax Koreanum only containing ethanol insoluble part obtained by precipitating ethanol; 3) among the ethanol insoluble part, the extract of Acanthopanax Koreanum containing polysaccharide with a molecular weight larger than range of 12,000 ~ 14,000; or 4) among the ethanol insoluble part, the extract of Acanthopanax Koreanum containing polysaccaride with a molecular weight over 100,000, which is respectively obtained from the root or stem of Acanthopanax Koreanum. The extract of the present invention shows a high inhibition activity against hepatitis and protects the liver, and thus, can be usefully used for the treatment or prevention of hepatitis, or as a liver protective drug.



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A. CLASSIFICATION OF SUBJECT MATTER

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Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched KOREAN PATENTS AND APPLICATIONS FOR INVENTIONS SINCE 1975

Electronic data base consulted during the intertnational search (name of data base and, where practicable, search terms used)
PUBMED ON LINE, DELPHION ON LINE, KISTI ON LINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
US 5900434 A (KWANG-HO PYUN ET AL.) 04 MAY 1999 SEE THE WHOLE DOCUMENT	1-10
KR 0241269 B (LG CO., LTD.) 02 MAR. 2000. SEE PAGES 1-5	1, 2, 5-8, 10
CHOI, IN POO ET AL., 'STUDIES ON DEVELOPMENT OF NOVEL FUNCTIONAL BIOLOGICALMOLECULES: INVESTIGATION OF MECHANISM OF ACTIONS AND REGULATORY MOLECULES OF INFLAMMATORY CYTOKINES'. IN; FINAL REPORT TO THE MINISTRY OF SCIENCE & TECHNOLOGY, JUL. 1998.	1-10
Tong L ET AL., 'Effects of plant polysaccharides on cell proliferation and cell membrane contents of sialic acid, phospholipid and cholesterol in S 180 and K 562 cells'. IN; Zhongguo Zhong Xi Yi Jie He Za Zhi, 1994 Aug, 14(8): 482-4.	3-4
US 6365768 B1 (PALLADINO ET AL.) 02. APR. 2002 SEE THE WHOLE DOCUMENT	1-10
KR 2003-0043191 A (KOLON. CO. LTD.), 02. JUN. 2003 SEE THE WHOLE DOCUMENT	1-10
	US 5900434 A (KWANG-HO PYUN ET AL.) 04 MAY 1999 SEE THE WHOLE DOCUMENT KR 0241269 B (LG CO., LTD.) 02 MAR. 2000. SEE PAGES 1-5 CHOI, IN POO ET AL., 'STUDIES ON DEVELOPMENT OF NOVEL FUNCTIONAL BIOLOGICALMOLECULES: INVESTIGATION OF MECHANISM OF ACTIONS AND REGULATORY MOLECULES OF INFLAMMATORY CYTOKINES'. IN; FINAL REPORT TO THE MINISTRY OF SCIENCE & TECHNOLOGY, JUL. 1998. Tong L ET AL., 'Effects of plant polysaccharides on cell proliferation and cell membrane contents of sialic acid, phospholipid and cholesterol in S 180 and K 562 cells'. IN; Zhongguo Zhong Xi Yi Jie He Za Zhi, 1994 Aug, 14(8): 482-4. US 6365768 B1 (PALLADINO ET AL.) 02. APR. 2002 SEE THE WHOLE DOCUMENT KR 2003-0043191 A (KOLON. CO. LTD.), 02. JUN. 2003

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INTERNATIONAL SEARCH REPORT

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International application No.
PCT/. /00155

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5900434 A	04.05.1999	WO 9534300 A1	21.12.1995
KR 0241269 B	02.03.2000	KR 1999-0047905 A	05.07.1999
US 6365768 B1	02.04.2002	W0 2079137 C1 W0 2079137 A1 W0 0073253 A1 US 20030050338 A1 US 20030040640 A1 JP 2003500464 T2 EP 1178952 A1 CN 1361760 T CA 2372962 AA BR 0011522 A AU 0050133 A5	07.11.2002 10.10.2002 07.12.2000 13.03.2003 27.02.2003 07.01.2003 13.02.2002 31.07.2002 07.12.2000 04.06.2002 18.12.2000
KR 2003-0043191 A	02.06.2003.	NONE	